

Claims

1. A door for at least partially covering a doorway defined by a wall and a lower surface, comprising:

a first door panel adapted to laterally translate along a plane relative to the doorway between a doorway blocking position and an unblocking position;

a first seal including a first sealing surface interposed between a first attachment end and a first distal end with the first attachment end being attached to the first door panel; and

a second seal disposed to allow relative movement between the first seal and the second seal, the second seal including a second sealing surface interposed between a second attachment end and a second distal end, such that the first door panel in the doorway blocking position causes the first sealing surface to face the second sealing surface and positions the second distal end between the first distal end and at least one of the first door panel and the first attachment end.

2. The door of claim 1, wherein at least one of the first sealing surface and the second sealing surface is tilted relative to the plane.

3. The door of claim 2, wherein both the first sealing surface and the second sealing surface are tilted relative to the plane.

4. The door of claim 1, further comprising an actuation system coupled to the first door panel for laterally translating the first door panel relative to the doorway between the doorway blocking position and the unblocking position.

5. The door of claim 4, wherein the actuation system includes an overhead track surface adapted to be mounted adjacent the doorway and being substantially linear and inclined with the first door panel being suspended therefrom.

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6. The door of claim 1, wherein the second seal is adapted to be substantially fixed relative to the doorway.

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7. The door of claim 1, wherein at least one of the first seal and the second seal is of a flexible material, so that with the first door panel in the doorway blocking position the first seal and the second seal stay in contact with each other even with some limited relative movement therebetween.

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8. The door of claim 7, wherein the first sealing surface engaging the second sealing surface creates a compressive force therebetween that in conjunction with the flexible material provides stored energy for enhanced sealing.

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9. The door of claim 1, wherein the first sealing surface engaging the second sealing surface creates a compressive force therebetween that helps align the first seal to the second seal.

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10. The door of claim 1, wherein the first seal comprises a first unitary piece of resilient foam and the second seal comprises a second unitary piece of resilient foam.

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11. The door of claim 1, wherein the first seal and the second seal have substantially similar cross-sectional profiles.

5 12. The door of claim 1, further comprising a second door panel adapted to laterally translate along a second plane substantially parallel to and offset out of coplanar alignment with the first plane, wherein the second seal is disposed on the second door panel.

10 13. The door of claim 1, further comprising:  
a third seal; and  
a fourth seal disposed on the first door panel and spaced from the first seal to define a gap therebetween, wherein the first seal is elongated horizontally, the fourth seal is elongated vertically, and the third seal horizontally spans the gap when the first door panel is in the doorway blocking position.

15 14. The door of claim 13, wherein the third seal is adapted to be substantially fixed relative to the doorway.

20 15. A door for at least partially covering a doorway defined by a wall and a lower surface, comprising:

25 a first door panel adapted to laterally translate along a plane relative to the doorway between a doorway blocking position and an unblocking position;  
a first seal carried with the first door panel and having a first sealing surface that faces the first door panel; and  
a second seal in sliding relationship with the first seal and having a second sealing surface facing the first sealing surface when the first door panel is in the doorway blocking position.

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16. A door for at least partially covering a doorway defined by a wall and a lower surface, comprising:

5 a first door panel adapted to laterally translate along a plane relative to the doorway between a doorway blocking position and an unblocking position; and  
a slide disposed on an elongated slide restraint to provide relative sliding motion therebetween, wherein the slide and elongated slide restraint are adapted to be spaced above the lower surface and at least one of the slide and the elongated slide restraint is attached to a first lower portion of the first door panel to limit movement  
10 of the first lower portion out of the plane

17. The door of claim 16, further comprising:

15 a first seal including a first sealing surface interposed between a first attachment end and a first distal end with the first attachment end being attached to the first door panel; and

20 a second seal disposed to allow relative movement between the first seal and the second seal, the second seal including a second sealing surface interposed between a second attachment end and a second distal end, such that the first door panel in the doorway blocking position causes the first sealing surface to face the second sealing surface and positions the second distal end between the first distal end and at least one of the first door panel and the first attachment end.

25 18. The door of claim 16, wherein the slide fully encircles the elongated slide restraint.

30 19. The door of claim 16, wherein the elongated slide restraint is pliable.

20. The door of claim 16, wherein the slide is attached to the first door panel.

5 21. The door of claim 16, wherein the elongated slide restraint is attached to the first door panel.

10 22. The door of claim 16, further comprising a second door panel substantially parallel with the first door panel and being displaced out of coplanar alignment therewith, such that the first door panel and the second door panel both move in a first direction to close the door and both move in a second direction to open the door, wherein the slide and the elongated slide restraint couple the first lower portion of the first door panel to a second lower portion of the second door panel to limit an extent to which the second door panel can be displaced out of coplanar alignment with the first door panel, yet still allow the door to open and close.

15 23. A door for at least partially covering a doorway defined by a wall and a lower surface, comprising: a first door panel adapted to laterally translate along a plane relative to the doorway between a doorway blocking position and an unblocking position and being pivotal to allow a lower edge of the first panel to pivot away from the lower surface as the door opens.

20 24. The door of claim 23, further comprising:  
a first seal including a first sealing surface interposed between a first attachment end and a first distal end with the first attachment end being attached to the first door panel; and

a second seal disposed to allow relative movement between the first seal and the second seal, the second seal including a second sealing surface interposed between a second attachment end and a second distal end, such that the first door panel in the blocking position causes the first sealing surface to face the second sealing surface and positions the second distal end between the first distal end and at least one of the first door panel and the first attachment end.

25. The door of claim 23, further comprising a cam surface situated to urge the first door panel to pivot in reaction to the translational movement of the first door panel such that the lower edge pivots away from the lower surface as the door opens.

26. A door moveable between a doorway blocking position and an unblocking position relative to a doorway defined by a wall and a lower surface, comprising:

a first door panel disposed along a plane and adapted to laterally translate relative to the doorway between the doorway blocking position and the unblocking position;

a second door panel adapted to laterally translate relative to the doorway between the doorway blocking position and the unblocking position;

a first seal disposed adjacent a trailing edge of the first door panel;

a second seal disposed adjacent a leading edge of the second door panel and engaging the first seal with the door in the doorway blocking position and spaced from the first seal with the door in the unblocking position, wherein at least one of the first seal and the second seal are sufficiently pliable to effectively seal therebetween, and wherein the first seal and the second seal are of sufficient rigidity to transfer momentum from the first door panel to the second door panel as the door moves from the unblocking position to the doorway blocking position, whereby the first seal engaging the second seal allows the first door panel moving to the doorway blocking position to pull the second door panel to the doorway blocking position.

27. The door of claim 26, wherein the first seal includes a first sealing surface interposed between a first attachment end and a first distal end with the first attachment end being attached to the first door panel, and wherein the second seal includes a second sealing surface interposed between a second attachment end and a second distal end, such that the first door panel in the blocking position causes the first sealing surface to face the second sealing surface and positions the second distal end between the first distal end and at least one of the first door panel and the first attachment end.

28. A door for at least partially covering a doorway defined by a wall and a lower surface, comprising:

a first door panel adapted to laterally translate along a plane relative to the doorway between a doorway blocking position and an unblocking position;

a first corner seal carried with the first door panel and having a first sealing surface that faces the first door panel; and

a second corner seal in sliding relationship with the first corner seal and having a second sealing surface that creates an L-shaped pattern of contact with the first sealing surface when the first door panel is in the doorway blocking position.

29. The door of claim 28 further comprising:

a first seal including a first sealing surface interposed between a first attachment end and a first distal end with the first attachment end being attached to the first door panel; and

a second seal disposed to allow relative movement between the first seal and the second seal, the second seal including a second sealing surface interposed between a second attachment end and a second distal end, such that the first door panel in the blocking position causes the first sealing surface to face the second sealing surface

and positions the second distal end between the first distal end and at least one of the first door panel and the first attachment end.

